

WHAT IS CLAIMED IS:

1. A wiring, comprising:

a first metal diffusion-preventing layer formed on  
a substrate;

5 a metal seed layer formed on the first metal  
diffusion-preventing layer;

a metal wiring layer formed on the metal seed  
layer; and

10 a second metal diffusion-preventing layer covering  
the exposed surface including the side surface of the  
multilayered structure having the metal seed layer and  
the metal wiring layer,

15 wherein the metal seed layer and the metal  
wiring layer are surrounded by the first metal  
diffusion-preventing layer and the second metal  
diffusion-preventing layer.

2. A wiring, comprising:

a first metal diffusion-preventing layer formed on  
a substrate;

20 a metal seed layer formed on the first metal  
diffusion-preventing layer;

a metal wiring layer formed on the metal seed  
layer; and

25 a second metal diffusion-preventing layer covering  
the exposed surface including the side surface of  
the multilayered structure having the metal seed layer  
and the metal wiring layer and the first metal

diffusion-preventing layer,

wherein the metal seed layer and the metal wiring layer are surrounded by the first metal diffusion-preventing layer and the second metal diffusion-preventing layer.

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3. A wiring, comprising:

a first metal diffusion-preventing layer formed on a substrate;

10 a metal wiring layer formed on the first metal diffusion-preventing layer; and

a second metal diffusion-preventing layer covering the exposed surface including the side surfaces of the metal wiring layer and the first metal diffusion-preventing layer,

15 wherein the metal wiring layer is surrounded by the first metal diffusion-preventing layer and the second metal diffusion-preventing layer.

4. A display device having at least one of a wiring, comprising electrodes of driving elements arranged to form a matrix, the scanning lines, the data lines connected to the driving element being surrounded by a first metal diffusion-preventing layer and a second metal diffusion-preventing layer.

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25 5. The display device having a wiring according to claim 4, wherein a transparent conductor layer or a metal layer is formed on the wiring with the second metal diffusion-preventing layer interposed

therebetween.

6. A method of forming a wiring, comprising:

forming a first metal diffusion-preventing layer  
on a substrate;

5 forming a metal wiring layer having a predeter-  
mined pattern on the first metal diffusion-preventing  
layer;

10 etching that region of the first metal diffusion-  
preventing layer which does not overlap with the metal  
wiring layer on a plane; and

15 forming a second metal diffusion-preventing layer  
in a manner to cover the exposed surface including the  
side surface of at least the metal wiring layer.

7. The method of forming a wiring according to  
15 claim 6, further comprising forming a metal seed layer  
on the first metal diffusion-preventing layer before  
formation of the metal wiring layer having a predeter-  
mined pattern, and etching the metal seed layer except  
the region bonded to the metal wiring layer after  
20 formation of the metal wiring layer having a  
predetermined pattern.

8. The method of forming a wiring according to  
claim 6, further comprising forming a metal seed layer  
having a predetermined pattern on the first metal  
25 diffusion-preventing layer before formation of the  
metal wiring layer having a predetermined pattern.

9. The method of forming a wiring according to

claim 6, wherein the first metal diffusion-preventing layer is formed after formation of another circuit element or a part of said another circuit element on the substrate.

5        10. The method of forming a wiring according to claim 6, wherein a cross section of the open portion of the pattern defining the cross sectional shape of the metal wiring layer is shaped rectangular or tapered reverse.

10      11. The method of forming a wiring according to claim 6, wherein the metal wiring layer is formed by using an electroless metal plating bath using a cobalt salt, a tin salt or glyoxalic acid as a reducing agent and not containing an alkali metal.

15      12. A method of manufacturing a display device including electrodes of driving elements for pixels arranged to form a matrix, and scanning lines and data lines connected to the driving elements, comprising:

20               forming a first metal diffusion-preventing layer;  
              forming a metal wiring layer providing any of the electrode having a predetermined pattern, the scanning line and the data line on the first metal diffusion-preventing layer;

25               removing by etching at least that portion of the first metal diffusion-preventing layer which is not bonded to the metal wiring layer; and

              forming a second metal diffusion-preventing layer

in a manner to cover the exposed surface including the side surface of at least the metal wiring layer.

13. The method of manufacturing a display device according to claim 12, further comprising forming 5 a metal seed layer on the first metal diffusion-preventing layer before formation of the metal wiring layer providing any of the electrode having a predetermined pattern, the scanning line and the data line, and etching that region of the metal seed layer which is 10 not bonded to the metal wiring layer after formation of the metal wiring layer having a predetermined pattern.

14. The method of manufacturing a display device according to claim 12, further comprising forming a metal seed layer having a predetermined pattern on the 15 first metal diffusion-preventing layer before formation of the metal wiring layer having a predetermined pattern.

15. The method of manufacturing a display device according to claim 12, further comprising converting at 20 least a part of the first metal diffusion-preventing layer into a silicide layer.